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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/667,266      | 09/19/2003  | Thomas Berndt        | 2002P02639WOUS      | 6023             |

7590 08/12/2005

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INTELLECTUAL PROPERTY DEPT.  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

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| EXAMINER |
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ABRAMOWITZ, HOWARD E

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| ART UNIT | PAPER NUMBER |
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1762

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |   |                                      |  |
|------------------------------|---|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/667,266    | <b>Applicant(s)</b><br>BERNDT ET AL. |  |
|                              | <b>Examiner</b><br>Howard E. Abramowitz | <b>Art Unit</b><br>1762              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicant has amended claims 7, 10, 15 and 18 and has added claims 23-26. Claims 7-26 are pending in the instant application. Claim 7 has been amended so that it states a ceramic powder comprising zirconium oxide and the limitation of no binding agent has been removed. Claim 10 has been amended so that comprising has been changed to consists essentially of. Claims 15 and 18 make the same changes as 7 and 10 respectfully. The rejection of claims 15, 17 and 19-22 as being anticipated by Fernihough et al. is withdrawn in view of the claimed amendments.

### ***Response to Amendment***

Applicant's argument that Fernihough et al. and Foster et al. do not expressly teach nor make it obvious that zirconium oxide would be a useful masking agent is found convincing. Therefore, the rejection of claims 7, 9, 10-14 and 18 over Fernihough et al. in view of Foster et al. is withdrawn. New grounds of rejection, however, are set forth below.

### ***Claim Objections***

Applicant is advised that should claims 7-14, 23 and 25 be found allowable, claims 15-22, 24 and 26 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it

Art Unit: 1762

is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7, 10-15 and 18-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Elam (US Patent No. 4,128,522).

Referring to claims 7 and 15, Elam discloses a method for coating a surface of a component comprising: applying a mask having a layer of ceramic powder comprising zirconium oxide to an uncoated area of the surface of the component and coating the component (column 1 lines 7-16, column 3 lines 15-37).

Referring to claims 10 and 18, Elam discloses that the maskant may include any amount of zirconium oxide these amounts would include an amount that would make the powder consist essentially of zirconium oxide (column 3 lines 38-45). It is noted that Elam discloses at column 3 line 47 that the maskant can include an inhibitor however, it would have been obvious to provide the zirconium oxide maskant without the inhibitor because it is well settled that omission of an element and its function is obvious if the function is not necessary see *Ex parte Wu*, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989).

Referring to claims 11 and 19, Elam discloses that the layer can be an aluminum layer (column 1 lines 7-16, column 3 lines 1-3).

Referring to claims 12 and 20, Elam discloses pack cementation as a method of applying the coating, which is a form of chemical vapor deposition (column 1 lines 41-42).

Referring to claims 13, 14, 21 and 22, Elam discloses that the component can be part of a turbine including the blade (column 1 lines 17-38).

Referring to claims 23 and 24, Elam discloses the mask contains an organic binding agent (column 4 lines 25-48).

Referring to claims 25 and 26, Elam discloses that the coating can be sprayed (column 4 lines 56-61).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 1762

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elam as applied to claims 7, 10-15 and 18-26 above, and further in view of Rigney et al. (US Patent No. 6,521,294).

Elam teaches to use a mask formed from ceramic powder comprising zirconium oxide it does not teach to use a suspension to form the mask.

However, Rigney et al. discloses (column 5 lines 21-22) that a slurry, synonymous with suspension, made of powder materials can be used to form the mask on a turbine blade (column 3 lines 25-35).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Elam to use a suspension to form the mask as suggested by Rigney et al. with the expectation that the suspension would have been an operable and suitable form in which to apply the maskant to the surface, because Elam teaches to use a mask formed of ceramic powder to coat the surface and Rigney et al. teaches that the powder for masks can be applied in the form of a suspension.

Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elam as applied to claims 7, 10-15 and 18-26 above, and further in view of Foster et al. (US Patent No. 4,726,104).

Elam discloses using a mask formed from a ceramic powder containing zirconium oxide it does not teach to form a paste with the ceramic powder.

However, Foster et al. teaches that the ceramic compound used as a mask for selectively coating turbine engine parts is a paste-like compound that is easily removable (abstract, column 5 line 11).

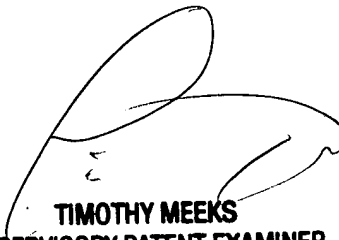
Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Elam to use the ceramic powder in a paste form as suggested by Foster et al. with an expectation that it is easily removable after processing.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard E. Abramowitz whose telephone number is 571-272-8557. The examiner can normally be reached on monday-friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**TIMOTHY MEEKS**  
**SUPERVISORY PATENT EXAMINER**